



# PRIMARY HISTOPLASMOSIS OF ORAL CAVITY

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## ABSTRACT

Primary cutaneous or mucosal histoplasmosis is a very rare disease and it is benign and self-limited in duration. Infection may follow inoculation of spores through skin and mucous membranes as in laboratory infection and presents as a chancreiform syndrome, with a nodule or ulcer at the site of inoculation and associated lymphangitis and lymphadenitis. Its spores are infectious to humans.

**KEYWORDS:** Buccal Mucosa, Histoplasmosis, Non-healing ulcer.

## INTRODUCTION:

A highly infectious mycosis caused by *Histoplasma capsulatum* and affecting primarily the lungs, where it is generally asymptomatic.<sup>1</sup> The fungus is dimorphic intracellular, parasitizing in the reticulo-endothelial system and involving the many organs like spleen, liver, kidney, central nervous system.<sup>2,7</sup> The disease caused by *H. capsulatum* var. *capsulatum*, referred to here as histoplasmosis (small-form histoplasmosis), is widely distributed throughout the world, occurring in some temperate and tropical countries in the Americas, Africa and Australasia.<sup>1,2</sup> Oral histoplasmosis usually occurs in association with the chronic disseminated form of the disease rarely it may present as the initial or the only mucocutaneous manifestation of the disease.<sup>4</sup>

## DISCUSSION:

Histoplasmosis, also called as Darling's disease or Histoplasmosis capsulati is caused by the dimorphic fungus, *H. capsulatum* is a granulomatous lesion.<sup>3,5,6</sup> Histoplasmosis is rarely reported in India, because of its various clinical presentation and lack of awareness among dermatologists but incidence of histoplasmosis are raising in India and it is the second most common opportunistic infection associated with HIV nowadays.<sup>4,5</sup> Mucocutaneous histoplasmosis is common in AIDS patients or immunocompromised patient but it is rare in immunocompetent hosts.

Two varieties of the fungus were differentiated—var. *capsulatum*, or the *H. var. Duboisii* on the basis of the yeast phase cell sizes.<sup>2,3,5</sup> Infants and children are frequently infected, and among adults the rate is highest in male agricultural workers. *H. capsulatum* exists as a saprophyte in nature and has often been isolated from soil particularly when contaminated with chicken feathers or droppings. Other birds, such as starlings, and bats have also been implicated in the establishment of saprophytic reservoirs of infection. Its spores are infectious not only to humans, but also to small animals such as dogs, cats and rats. The disease is not transmitted from human to human or from animal to human, but by the inhalation of air-borne conidia.

Histoplasmosis present as cutaneous lesion only in 6% of patients.<sup>2,3</sup> Most commonly, they present as primary ulcers, often with annular, heaped up borders. They may also present as papules, nodules, or large plaque like lesions. Lesions are purpuric or crusted or may develop pustular caps and ulcerate which may be tender, red nodules due to inflammation or panniculitis. Upper alimentary canal histoplasmosis usually associated with systemic disease, especially in immunocompromised patients, such as in human immunodeficiency virus (HIV) infection.<sup>4</sup> Isolated oral histoplasmosis as presenting sign, without systemic involvement, with underlying HIV is very rare.<sup>3,4,5</sup> Oral mucosal lesion present in half of the disseminated histoplasmosis with cutaneous lesion. Oral lesions are present in 30-50% patient in disseminated disease, and it may involve all part of the oral mucosa, most commonly affected sites are the tongue, palate and buccal mucosa.<sup>5</sup>

Lesions of the oral mucosa usually start as painless papular swellings and later develop ulcer. The contiguous skin may also be involved. Biopsy of a mucosal or cutaneous lesion is the most rapid and specific diagnostic method for rapid institution of lifesaving therapy as culture may require up to a 4-week incubation period.<sup>2,3</sup>

Histoplasmosis can be diagnosed by combined approach on the basis of clinical signs and symptoms with lab investigation like biopsy, cultures, serologic test, including complement fixation test, immunodiffusion, and histoplasmin skin test and culture of fungus. Fungal culture is strongest diagnostic evidence for histoplasmosis.<sup>2,3,4</sup>

The spores of *H. capsulatum* are visualized in sections stained with H&E, Gram, or Giemsa. Silver impregnation stains and electron microscopic studies show that *H. capsulatum* does not possess a capsule and that the inner portion of the clear space represents the cell wall of the fungus and the clear space itself is filled with granular material that separates the cell wall of the fungus from the cytoplasm of the macrophage.<sup>2,3</sup> When inhaled, the latter sprout and transform into small budding yeasts that are 2 to 5 µm in diameter.<sup>5</sup> In cultures at a temperature of 37°C, the organism also grows in the yeast like form.<sup>2,3</sup>

## CONCLUSION:

Primary histoplasmosis of oral mucosa is a rare infectious disease. It is more common in HIV infected or immunocompromised patient as opportunistic infection. So clinician should always keep in mind as a differential diagnosis in cases of non-healing ulcer of mucosa or skin.

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